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09/539,409	03/30/2000	Masahiko Yamada	Q56564	7984

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Sughrue Mion Zinn Macpeak & Seas PLLC
2100 Pennsylvania Avenue N W
Washington, DC 20037-3202

EXAMINER	
BHATNAGAR, ANAND P	

ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/539,409	YAMADA, MASAHIKO	
	Examiner	Art Unit	
	Anand Bhatnagar	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31 and 34-39* is/are rejected.

7)☒ Claim(s) *32 and 33* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Arguments

1. Applicant's amendment filed on 10/25/05 has been entered and made of record.

2. Applicant's arguments filed on 10/25/05 have been fully considered but they are not persuasive. Applicant's representative argues, regarding claims 34 and 36, that the claim limitations of these claims are disclosed on pages 17, 26, 27, and on page 2 lines 23-26. Examiner disagrees. The specifications require a distance and angle to be calculated **between measuring points** not of a single measuring point. How can a single measuring point have a distance and an angle as claimed in these claims? Therefore, examiner maintains the 35 USC 112, 1st paragraph, for these claims and now includes newly added claims 38 and 39 to this rejection.

Applicant also argues, regarding claim 1, on bottom of page 12 to third paragraph on page 13, that the prior art of IBM's technical disclosure bulletin ("Selective Area Image Compression," Volume 29, Issue 12, page number 5356-5357, May 1, 1987, will be referred as ITDB) nor Wang (U.S. patent 4,598,369) teaches the features of clam 1 and there is no motivation to make the modification as stated by the examiner in his office action filed on 09/16/04. Examiner disagrees. As examiner stated in the previous office action, filed on 09/16/04, that it would have been obvious to one skilled in the art to modify the system to only include the object of interest, in this case a fracture in a bone, to get the area of the bone affected by the fracture since the ITDB discloses to

obtain a region of interest, i.e. this enclosure gives the area (geometric feature) of the region (ITDB; page 5356), using coordinate points (i.e. measuring points). The prior art of ITDB discloses to set coordinate points (measuring points in a radiological image to obtain a region/area in an image of an object of interest in the image. The prior art of ITDB does not disclose the dimensions for the region/area to be, but this region/area is set by an individual using a highlighting pen. If there are different individuals/physicians/technicians setting up the regions by setting the coordinates then different size regions/areas will be obtained for each individual since they will not all set the same coordinates for the region of interest resulting in some regions being smaller and some being bigger. Since, the coordinates are set by an individual then anyone skilled in the art of image processing could set the coordinates wherein only the fractured part of the bone is the region of interest and this will give the area (geometric feature) of the object in the image.

Further applicant argues, on bottom of page 13, that the prior art of Wang does not make up the deficiency of the prior art of ITDB for storage of a displayed image. Examiner disagrees. The prior art of ITDB, on page 5357, discloses to store the radiological image and also to display it on a monitor but does not exactly state to store a displayed image. The analogous prior art of Wang et al. teaches to store the data of the displayed images (Wang et al.; col. 2 lines 20-35) which examiner believes meets applicant's limitation. Examiner refers to the rejection below.

Claim Rejections - 35 USC § 112

3. Claims 34, 36, 38, and 39 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Nowhere, in the specifications, as originally filed, does the calculation of the angle information take place of the measuring point. If applicant's representative believes that there is support for this limitation then please show where it is supported in the specification, as originally filed. Examiner will address these claims as best understood

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

A.) Claims 1-4, 16-19, 31, 35, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over IBM Technical Disclosure Bulletin ("Selective Area Image Compression," Volume 29, Issue 12, page number 5356-5357, May 1, 1987, will be further referred as "ITDB") and Wang et al. (U.S. patent 4,598,369).

Regarding claims 1 and 16: A storing method comprising the step of:

storing a radiation image displayed on a display screen of an image display unit, the radiation image including a measuring point designated for measuring geometric features of an object included in a radiation image (fig. and the second whole paragraph on page 2, wherein the radiation image and the coordinates "measuring points" are stored. The measuring points are of a specific region in the radiation image of a specific object in the image to be analyzed). ITDB discloses to obtain a specific region of a radiation image, containing an object, by placing coordinate points "measuring points" in order to define the boundaries of the region wherein the geometrical features of the region can be obtained from the designated coordinates. It would have been obvious for one skilled in the art, based on the ITDB disclosure, to modify the system to set the coordinates for just the object region and obtain it's geometric features since the disclosure teaches to do it for a whole region, wherein the object is part of the whole region.

wherein positional information of said measuring point specified on said display screen is stored in a storage medium along with said radiation image (fig. and the second whole paragraph on page 2, wherein the radiation image and the coordinates "measuring points" are stored. These measuring points give the location/position of the region/object).

ITDB discloses to store a radiation image along with a specific region which has been highlighted by setting coordinates "measuring points" of the region. ITDB does not teach to store a radiation image of one that is displayed

first. Wang et al. teaches to store radiation images that are displayed (Wang et al.; col. 2 lines 20-35). It would have been obvious to one skilled in the art to combine the teaching of Wang et al. to that of ITDB because they are analogous in storage of radiographic images. One skilled in the art would have been motivated to incorporate the teaching of Wang et al. into the system of ITDB to allow the presentation of a diagnostic quality x-ray image taken at any selected parallel plane (Wang et al. col. 1 lines 23-25).

Regarding claims 2 and 17: The storing method wherein a result of measurement, obtained based on said positional information, is stored along with said radiation image and said positional information (ITDB; second paragraph on page 2, wherein the image and the coordinates/location is stored together).

Regarding claims 3, 4, 18, and 19: The storing method wherein said positional information and a measurement result of said measuring point are stored as numerical information (ITDB; second paragraph on page 2. It is inherent that the coordinates X1, X2, Y1, Y2, etc. and/or locations are numerical values).

Regarding claim 31: The storing method wherein the measuring point is specified by a user input (ITDB; third paragraph on page 2, wherein the region, B, is designated by a light pen, i.e. manually designated by a user).

Regarding claims 34 and 36: The storing method wherein the geometric features include at least one of distance and angle information of the measuring point in relation to the object of the radiation image (ITDB; second paragraph on

page 2, wherein the coordinates "measuring points" are designated of a region from which the region can be analyzed for it's dimensions and/or distance to the object).

Regarding claims 35 and 37: The storing method wherein the positional information of said measuring point is stored related to the radiation image (ITDB; second paragraph on page 2).

B.) Claims 5, 6, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over IBM Technical Disclosure Bulletin ("Selective Area Image Compression," Volume 29, Issue 12, page number 5356-5357, May 1, 1987, will be further referred as "ITDB"), as modified by Wang et al. (U.S. patent 4,598,369), and further in view of Kuni et al. (Japanese patent number JP405272952A).

Regarding claims 5, 6, 20, and 21: The storing method wherein said positional information and a measurement result of said measuring point are stored as image information that is embedded in said radiation image and displayed.

ITDB discloses to store a radiation image along with a specific region which has been highlighted by setting coordinates "measuring points" of the region. ITDB does not disclose to embed the image information into the image. Kuni et al. teaches to embed image information into an image (Kuni et al.; Constitution part of the Abstract). It would have been obvious to one skilled in the

art to combine the teaching of Kuni et al. to that of ITDB, as modified by Wang et al., because they are analogous in the field of radiographic images. One in the art would have been motivated to incorporate the teaching of Kuni et al., modified for storing and displaying this embedded image, to the system of ITDB, as modified by Wang et al., in order for an inexperience person to perform secure inspection free from errors (Kuni et al.; constitution part of the abstract).

C.) Claims 7, 8, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over IBM Technical Disclosure Bulletin ("Selective Area Image Compression," Volume 29, Issue 12, page number 5356-5357, May 1, 1987, will be further referred as "ITDB"), as modified by Wang et al. (U.S. patent 4,598,369), and further in view of Nakajima et al. (U.S. patent 4,944,189).

Regarding claims 7, 8, 22, and 23: The storing method as set forth in claim 1, wherein said positional information and a measurement result of said measuring point are stored as overlay image information that is overlaid on said radiation image and displayed.

ITDB discloses to store a radiation image along with a specific region which has been highlighted by setting coordinates "measuring points" of the region. ITDB does not teach to overlay the image information onto the image. Nakajima et al. teaches to overlay the obtained image information onto the tomographic image (Nakajima et al.; col. 9 lines 59-67). It would have been obvious to one skilled in the art to combine the teaching of Nakajima et al. to that

of ITDB, as modified by Wang et al., because they are analogous in the field of tomographic/radiographic imaging of medical images. One in the art would have been motivated to incorporate the teaching of Nakajima et al., modified for storing and displaying this overlaid image, to the system of ITDB, as modified by Wang et al., in order for the information to be depicted explicitly on a screen (Nakajima et al.; col. 9 lines 65-67).

D.) Claims 9-12, 14, 15, 24-27, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over IBM Technical Disclosure Bulletin ("Selective Area Image Compression," Volume 29, Issue 12, page number 5356-5357, May 1, 1987, will be further referred as "ITDB"), as modified by Wang et al. (U.S. patent 4,598,369), and further in view of Hama et al. (U.S. patent 4,751,507).

Regarding claims 9-12 and 24-27: The storing method wherein said radiation image is an entire image representing the whole of said radiation image and an enlarged image of a portion of said entire image displayed for specifying said measuring point.

ITDB discloses to store a whole radiation image, region A, and a portion of a radiation image, region B (ITDB; fig. and second paragraph on page 2). ITDB does not teach to display the whole image and an enlarged image of a portion of the entire image. Hama et al. teaches to display an entire image simutaneously with an enlarged portion of the image (Hama et al.; fig. 5, col. 1 lines 10-21 and col. 4 lines 32-40). It would have been obvious to one skilled in the art to

combine the teachings of Hama et al. to that of ITDB, as modified by Wang et al., because they are analogous in image processing. One in the art would have been motivated to incorporate the teaching of Hama et al. to the system of ITDB, as modified by Wang et al., in order for a operator not having to alternate between the entire image and an enlarged portion of the image (Hama et al.; col. 1 lines 62-67).

Regarding claims 14 and 29: The storing method wherein said enlarged image is obtained by enlarging a portion of said entire image displayed on said display screen, indicated by an indicating mark, and also by overwriting and displaying the enlarged portion on an area including said portion. It is rejected for same reasons as claim 13 above and for the following limitation of overwriting (Hama et al.; col. 6 lines 21-25, wherein the overlying is read as "overwriting"). The obvious and motivation are the same as claim 9 above.

Regarding claims 15 and 30: The storing method wherein said enlarged image is obtained by enlarging and displaying a portion, indicated in said entire image by an indicating mark, on an area on the display screen differing from an area on which said entire image is displayed (Hama et al.; fig. 5 elements 22-26 and col. 4 lines 32-35, wherein the enlarged portion of the image and the entire image are shown on two different areas of the screen/display). The obvious and motivation are the same as claim 9 above.

E.) Claims 13 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over IBM Technical Disclosure Bulletin ("Selective Area Image Compression," Volume 29, Issue 12, page number 5356-5357, May 1, 1987, will be further referred as "ITDB"), as modified by Wang et al. (U.S. patent 4,598,369) and Kuni et al. (Japanese patent number JP405272952A), and further in view of Hama et al. (U.S. patent 4,751,507).

Regarding claims 13 and 28: They are rejected for the same reasons as claim 9 above.

Allowable Subject Matter

5. Claims 32 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory

action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anand Bhatnagar whose telephone number is (571) 272-7416, whose supervisor is Jingge Wu whose number is (571) 272-7429, Central fax is 571-273-8300, and Tech center 2600 customer service office number is 703-306-0377.

AB

Anand Bhatnagar

Art Unit 2623

January 9, 2006

SAMIR AHMED
PRIMARY EXAMINER